

the same shape in the strap. When the bearing for the screw-head is made in this manner, the hole through the clamp must have plenty of clearance for the body part of the bolt.

When designing clamps or straps of the types shown, one of the most important considerations is to provide enough metal around the holes, so that the strap will stand the pressure of the screw without breaking at the weakest place, which, naturally is in a line through the center of the hole. As a rule, these straps are made of machine steel, although large clamps may sometimes be made from cast iron.

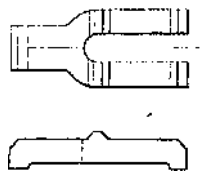


Fig. 5-

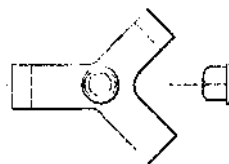


Fig. 6.

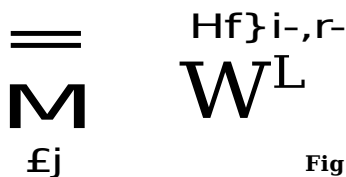


Fig. 7-

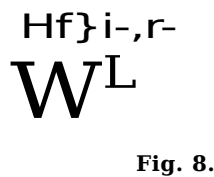


Fig. 8.

Figs. 7 and 8 show clamps bent to meet the requirements, and also indicate the application of this type of clamp, the part shown in cross-section being the work. These clamps are commonly used for clamping work in the planer and milling machine, but are also frequently used in jig and

fixture design.

The screws used for clamping these straps are either standard hexagonal screws or standard collar-head screws. When it is not necessary to tighten the screws very firmly, thumb-screws are frequently used, especially on small jigs.

Sometimes the strap or clamp is arranged as shown in Fig. 9, the screw passing through it at the center and bearing upon the work, either directly, as indicated, or through the medium of a collar fitted to the end of the clamping screw, as shown in